



WJN  
EVIDENCE  
F.Y.I.  


HENRY,  
PLEASE GIVE TO  
YOUR STAFF  


**State Fire Marshal  
Question and Answer Session  
with the  
Louisiana Automatic Fire Alarm Association  
March 19, 1999**

I. Does your office allow installation of detectors and notification appliances in a totally separated building that report to a 'main building' control panel? I'm under the impression that NFPA doesn't allow this, due to the fact that the notification appliances could be silenced before personnel in the remote building are aware of a fire situation.

**Yes. While we can see where this might be of some concern, we are unaware of any section of NFPA 72 that would prohibit such an arrangement. Also, please refer to State Fire Marshal Formal Interpretation 98-2 concerning alarm silencing and who is allowed to silence the fire alarm system.**

II. It is my understanding that your office is planning to reopen the Fire Protection Licensing Law next Session. Can you provide us information on the proposed changes? **The only changes are the creation of a D-2 license (owners of fire alarm systems to be able to perform minor service and repair work on their systems) and the trainee categories for licensing (similar to an apprentice, but no time limitation). The legislation is required to set the fees for these licenses.**

III. The capture and shutdown of elevators has become a major confusion factor for the installers of fire detection and evacuation equipment. I would appreciate it if you could clarify for my understanding, the requirements within the State of Louisiana by considering the following questions:

Statements:

A. NFPA 72, para. 3-8.14.1 requires that elevator recall be accomplished by the building fire alarm control panel or in the event none exists, by a dedicated control panel designated as 'Elevator Recall and Supervisory Panel.'

B. Para. 3-8.15 in addressing methods of elevator shutdown prior to the flow of water, describes the use of heat detectors and pressure or waterflow switches to accomplish the shut down of the power, commonly done by means of a shunt trip circuit breaker.

C. Para. 3-10 addresses the requirements for listing, standby power and supervision of circuits associated with suppression system activation in accordance with Chapter 1 of NFPA 72.

1. In the event that elevator power shutdown mandated by 3-8.15 is activated by heat detection, is it intended that the control panel required by 3-8.14 be used for supervision and control of these circuit?

4028

Yes, the provisions of 101:7-6.1.9 would require the heat detectors be connected to the control panel and be supervised. 101:7-6.1.9 defines a protective signaling and control system as a system that is used for INITIATION, NOTIFICATION, and CONTROL. The heat detector is the 'initiation' device that inputs the signal to the control panel that in turn outputs to 'control' the building equipment to enhance the protection of life safety by shutting the power off to the elevator.

2. Various methods have been used in the past to furnish 'fail safe' operation of these circuits without the use of a control panel. If the answer to question 1. is no, is it allowable that these functions be accomplished by means of relay circuits and building power without the use of a listed control panel?

No, per NFPA 72:3-8.14, a listed control panel shall be required (whether it is dedicated to the elevator or it is part of a building fire alarm panel).

3. In the event that elevator power shutdown mandated by 3-8.15 is activated by waterflow detection, is it intended that the control panel required by 3-8.14 be used for supervision and control of these circuit?

Yes, the provisions of 101:7-6.1.9 would require the waterflow switch to be connected to the control panel and be supervised. 101:7-6.1.9 defines a protective signaling and control system as a system that is used for INITIATION, NOTIFICATION, and CONTROL. The waterflow switch is the 'initiation' device that inputs the signal to the control panel that in turn outputs to 'control' the building equipment to enhance the protection of life safety by shutting the power off to the elevator. However, utilizing a waterflow switch to signal elevator power shut off is restricted only to elevators constructed or substantially remodeled prior to September 1, 1986 (re: handout).

4. If the answer to question 3 is no, is it allowable that the waterflow sensor contacts and building power be used directly to control the elevator power shutdown?

No, per NFPA 72:3-8.14, a listed control panel shall be required (whether it is dedicated to the elevator or it is part of a building fire alarm panel).

5. If the sprinkler system serving the hoistway and machine room is a dry pipe pre-action system, is it required that the control panel, detection devices and solenoid valve be listed for compatibility?

The control panel and detection devices are required to be compatible, whenever their listings mandate compatibility (such as 2-wire smoke detectors and some heat detectors).

6. A previous interpretation by the State Fire Marshal's Office mandated that sprinkler piping be installed exterior to the elevator shaft with a branch into the shaft at each level where sprinkling is required. In addition, it requires that shutoff valves be accessible within the building on each branch of sprinkler piping penetrating into the shaft. Is it required that these valves be electrically supervised?

4029

**In a supervised automatic sprinkler system, the answer is yes. The valves shall be installed with a tamper switch in accordance with 72:3-8.10.2**

**In a non-supervised sprinkler system, the answer is no. The valves are only required to be listed indicating type, per NFPA 13:2-7.1.1, and must incorporate a method of readily determining that the valve is open.**

7. If the answer to question 6 is yes, is it required that these supervisory functions be central station monitored?

**In a supervised automatic sprinkler system, the answer is yes. NFPA 101:7-7.2 requires the supervisory signals to sound and be displayed at a location within the protected building that is constantly attended by qualified personnel, or at an approved remotely located receiving facility. Examples of approved receiving facilities are central station, remote station, proprietary alarm receiving facility, and some fire departments.**

**In a non-supervised sprinkler system, the answer is no.**

8. Does each branch of sprinkler piping described in question 6 require a waterflow sensor?

**If water flow is used to kill power, the answer is yes. This is pursuant to 101:7-6.2 and/or 101:7-7.2, if applicable.**

**Please note that utilizing a waterflow switch to signal elevator power shutoff is only allowed for elevators constructed or substantially remodeled prior to September 1, 1986.**

9. If the answer to question 8 is yes, is each branch required to separately activate the elevator shutdown circuitry?

**In new construction, elevator power shut down is triggered by a signal from a heat detector in the elevator shaft (not the shaft waterflow switch). However, for elevators constructed or substantially remodeled prior to September 1, 1986, the waterflow switch may also initiate a signal to the panel to then trigger power shut down to the elevator (or these older elevators may utilize heat detectors to signal power shut down).**

10. If the answer to question 9 is yes, is each required to be annunciated separately for waterflow?

**No. 72:3-8.5.3 allows up to five (5) waterflow switches to be connected to a single initiating device circuit.**

11. Paragraph 3-8.14.5 references "separate and distinct" visible annunciation at the control unit and required annunciation to alert firefighters and other emergency personnel that the elevators are no longer safe to use. Does the State Fire Marshal 'require' annunciation at any location other than the control panel? If so, where?

**If the control panel is not located at a constantly attended area, then annunciation shall be required in the vicinity of the first floor elevators. Also, this office shall reserve the right to require other annunciators depending on the specific building conditions.**

4030

# Automatic Sprinkler System Modifications REQUEST FOR EXEMPTION

1 of 2

PLEASE PRINT CLEARLY OR TYPE INFORMATION

LOUISIANA DEPARTMENT OF PUBLIC SAFETY AND CORRECTIONS  
 OFFICE OF STATE FIRE MARSHAL  
 5150 FLORIDA BOULEVARD  
 BATON ROUGE, LOUISIANA 70806  
 PHONE (225) 925-4920 FAX (225) 925-4414  
 WEB SITE: www.dps.state.la.us/sfm

**REVIEW FEE**  
**\$20.00**

DATE OF APPLICATION **8-16-01**  
 STATE FIRE MARSHAL ARCHITECTURAL REVIEW NUMBER **SEE**  
**PO ATTACH LETTER**

PROJECT TITLE (Name of Business) **ONE BELLEMEAD CENTRE SUITE 580** PROJECT FLOOR **5**  
 NAME OF BUILDING/SHOPPING CENTER **ONE BELLEMEAD CENTRE** TOTAL NO FLOORS IN BUILDING **5**  
 PHYSICAL LOCATION OF PROJECT: Inside City Limits  Outside City Limits   
 ADDRESS (Street/Suite) **425 YOUNG DR** EXEMPTION RESUBMITTAL? YES  NO   
 CITY (In or Near) **SHREVEPORT** PREVIOUS REVIEW NUMBER: \_\_\_\_\_  
 ZIP CODE **71105** PARISH **CADDO**

PROFESSIONAL OF RECORD (P.O.R.) (If none, then MUST be Owner)  
 NAME **JIM ROBINSON - UL COENAL PROPERTIES** PHONE **(318) 221-0541**  
 MAILING ADDRESS (Street/P.O. Box) **207 MILAN ST.** FAX **(318) 221-0541**  
 CITY **SHREVEPORT** STATE **LA.** ZIP CODE **71101**  
 P.O.R. LICENSE NO. **[Signature]** EMAIL ADDRESS \_\_\_\_\_

**SPRINKLER SYSTEM INFORMATION**

OCCUPANCY CLASS (NFPA 101 Chapter) <b>BUSINESS</b>	HAZARD CLASS (PER NFPA 13) <b>LIGHT</b>	PUMP INFORMATION PRESSURE (psi) <b>N/A</b>	PLACARD INFORMATION PRESSURE (psi) <b>10</b>
SYSTEM TYPE <input checked="" type="checkbox"/> WET <input type="checkbox"/> DRY	DESIGN TYPE <input checked="" type="checkbox"/> HYDRAULIC <input type="checkbox"/> PIPE SCHEDULE	MAIN REDUC. VALV. SET <b>N/A</b>	FLOW (GPM) <b>1500</b> SF, WITH DEMAND OF <b>47.2</b> PSI AT <b>278.7</b> GPM AT <b>0.15</b> OF RATED
WATER SOURCE <input checked="" type="checkbox"/> MUNICIPAL <input type="checkbox"/> PRIVATE	WATER SUPPLY DATA (psi) <b>80</b>	RESIDUAL FLOW (psi) <b>77</b> FLOW (GPM) <b>130</b>	TEST DATE <b>5/16/01</b>
TOTAL NUMBER OF EXEMPTION SPRINKLERS <b>2</b>	AREA COVERED BY THIS EXEMPTION (sq ft) <b>1600</b>	COST OF WORK TO BE DONE <b>\$ 480.00</b>	

DESCRIPTION OF WORK **ADD 1 NEW PENDENT & RELOCATE 1 DUE TO NEW WALL IN CLOSET. PIPING SHALL BE 1" SCH. 40 AND ARMORS LONGER THAN 2' SHALL HAVE A HANGER.**

SPRINKLER MFG **CENTRAL** MODEL **4B-02** TYPE **PENDENT** TEMPERATURE: **155** ORifice size: **1/2**

EFFECT ON SYSTEM **NONE**

**SPRINKLER SYSTEM CONTRACTOR / ENGINEER / DESIGNER (not the POR)**

NAME **Delbert H. Thompson Jr.** EMPLOYEE STATE LICENSE NO. \_\_\_\_\_  
 FIRM NAME **River City Fire Protection** FIRM MAILING ADDRESS **2911 Williamson Way Shreveport, La. 71118**  
 CONTACT NAME **C. Shawn Leonard**  
 FIRM LICENSE NUMBER **19-S00260** PHONE NO **(318) 688-6644** FAX NO **(318) 688-6616**  
 EMAIL ADDRESS **rcfire@shreve.net**

**FOR FIRE MARSHAL USE ONLY**

DATE RECEIVED **8-16** PROJECT NUMBER **227656** REVIEW ARCHITECT \_\_\_\_\_  
 Accepted Comments **APPEARS TO COMPLY.** **Floyd Carraway 08/16/01 4031**  
 Denied

- Reading File
- High Rise File
- SFM Health Care
- Fire Prevention Bureau
- SFM District
- Sprinkler Contractor
- Applicant

# Automatic Sprinkler System Modifications REQUEST FOR EXEMPTION

PLEASE PRINT CLEARLY OR TYPE INFORMATION

LOUISIANA DEPARTMENT OF PUBLIC SAFETY AND CORRECTIONS  
OFFICE OF STATE FIRE MARSHAL

DATE OF APPLICATION	8/17/01
STATE FIRE MARSHAL ARCHITECTURAL REVIEW NUMBER	<b>PO 220102</b>

5150 FLORIDA BOULEVARD  
BATON ROUGE, LOUISIANA 70806

PHONE (225) 925-4920 FAX (225)925-4414  
WEB SITE: www.dps.state.la.us/sfm



Reading File

High Rise File

SFM Health Care

Fire Prevention Bureau

SFM District

PROJECT TITLE (Name of Business)		OFFICE ADDITION MIKE HOOKS, INC.		PROJECT FLOOR		2	
NAME OF BUILDING/SHOPPING CENTER				TOTAL NO FLOORS IN BUILDING		2	
PHYSICAL LOCATION OF PROJECT		ADDRESS (Street/Suite)		EXEMPTION RESUBMITTAL?		<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	
Inside City Limits <input checked="" type="checkbox"/>		409 MIKE HOOKS RD.		PREVIOUS REVIEW NUMBER:			
Outside City Limits <input type="checkbox"/>		CITY (in or Near)		ZIP CODE		PARISH	
		WESTLAKE		70669		CALCASIEU	

### PROFESSIONAL OF RECORD (P.O.R.) (If none, then MUST be Owner)

NAME		PHONE	
MAILING ADDRESS (Street/P.O. Box)		FAX	
CITY		STATE	
P.O.R. LICENSE NO		ZIP CODE	
EMAIL ADDRESS			

### SPRINKLER SYSTEM INFORMATION

OCCUPANCY CLASS (NFPA 101 Chapter)	BUSINESS INDUSTRIAL	HAZARD CLASS (PER NFPA 13)	ORDINARY GR I	PUMP INFORMATION	PLACARD INFORMATION
SYSTEM TYPE	<input checked="" type="checkbox"/> WET <input type="checkbox"/> DRY	DESIGN TYPE	<input checked="" type="checkbox"/> HYDRAULIC <input type="checkbox"/> PIPE SCHEDULE	PRESSURE (psi) 50	0.15 GPM/SF OVER
WATER SOURCE	<input type="checkbox"/> MUNICIPAL <input checked="" type="checkbox"/> PRIVATE	MAN REDUC. VLV. GET	N/A psi	FLOW (gpm) 60	156 SF. WITH DEMAND OF
	WATER SUPPLY DATA	PRESS REDUC. VLV. GET	N/A psi	TEST DATE	23.57 PSI AT
	STATIC (psi) 50	RESIDUAL (psi) 35	FLOW (gpm) 50	8/15/01	31.29 GPM AT
TOTAL NUMBER OF EXEMPTION SPRINKLER	2	AREA COVERED BY THIS EXEMPTION (sq)	156	COST OF WORK TO BE DONE	\$1500.00

DESCRIPTION OF WORK  
ADD 2 HEADS IN STORAGE ROOM OFF OF 1" DOMESTIC LINE.

SPRINKLER MFG	MODEL	TYPE	TEMPERATURE:	ORIFICE SIZE:
VICTAULIC	V27	PENDENT	155°	1/2"

EFFECT ON SYSTEM  
SEE HYDRAULIC CALCULATIONS ATTACHED.

### SPRINKLER SYSTEM CONTRACTOR/ENGINEER/DESIGNER (not the POR)

NAME	RON L FOREMAN		EMPLOYEE STATE LICENSE NO.	E000134
FIRM NAME	BAYOU FIRE PROTECTION	FIRM MAILING ADDRESS		
CONTACT NAME	RON L FOREMAN	2728 W. PRIEN LAKE RD. - P.O. BOX 5394 LAKE CHARLES LA 70606-5394		
FIRM LICENSE NUMBER	3000134	PHONE NO	337-478-3217	FAX NO
		337-474-5269		
	EMAIL ADDRESS ronforeman@bayoufire.net			

FOR FIRE MARSHAL USE ONLY	DATE RECEIVED	PROJECT NUMBER	REVIEW ARCHITECT
	<input checked="" type="checkbox"/> ACCEPTED <input type="checkbox"/> DENIED	Comments <i>Approved to Copy.</i> <i>Floyd Carville 4032</i> <i>08/20/01</i>	

SFM District - 5/25/01/00  Applicant

# Automatic Sprinkler System Modifications REQUEST FOR EXEMPTION

PLEASE PRINT CLEARLY OR TYPE INFORMATION

DATE OF APPLICATION	8/14/01
STATE FIRE MARSHAL ARCHITECTURAL REVIEW NUMBER	<b>PO</b>

LOUISIANA DEPARTMENT OF PUBLIC SAFETY AND CORRECTIONS  
OFFICE OF STATE FIRE MARSHAL  
5150 FLORIDA BOULEVARD  
BATON ROUGE, LOUISIANA 70806  
PHONE (225) 925-4920 FAX (225) 925-4414  
WEB SITE: www.dps.state.la.us/sfm

<b>REVIEW FEE</b> <b>\$20.00</b>
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PROJECT TITLE (Name of Business)	CAJUNDOME MODIFICATIONS	PROJECT FLOOR	1 <sup>ST</sup>
NAME OF BUILDING/SHOPPING CENTER	CONTACT : Mr. Alvin Guidry	TOTAL NO FLOORS IN BUILDING	1
PHYSICAL LOCATION OF PROJECT	ADDRESS (Street/Suite)	EXEMPTION RESUBMITTAL? YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	PREVIOUS REVIEW NUMBER :
Inside City Limits <input type="checkbox"/>	444 Cajundome Blvd	ZIP CODE	70506
Outside City Limits <input type="checkbox"/>	CITY (In or Near) Lafayette	PARISH	Lafayette

**PROFESSIONAL OF RECORD (P.O.R.) (If none, then MUST be Owner)**

NAME	CAJUNDOME COMMISSION	PHONE	(337) 265-2238
MAILING ADDRESS (Street/P.O. Box)	444 Cajundome Blvd	FAX	( )
CITY	Lafayette	STATE	LA.
		ZIP CODE	70506
P.O.R. LICENSE NO	EMAIL ADDRESS		

**SPRINKLER SYSTEM INFORMATION**

OCCUPANCY CLASS (NFPA 101 Chapter)	Assembly	HAZARD CLASS (PER NFPA 13)	LIGHT HAZARD	PUMP INFORMATION	PLACARD INFORMATION
SYSTEM TYPE	<input type="checkbox"/> WET <input type="checkbox"/> DRY	DESIGN TYPE	<input checked="" type="checkbox"/> HYDRAULIC <input type="checkbox"/> PIPE SCHEDULE	PRESSURE (psi)	100
WATER SOURCE	<input checked="" type="checkbox"/> MUNICIPAL <input type="checkbox"/> PRIVATE	MAIN REDUC. VLV. SET	psi	FLOW (gpm)	500
TOTAL NUMBER OF EXEMPTION SPRINKLERS	AREA COVERED BY THIS EXEMPTION (sf)	RESIDUAL (psi)	44	TEST DATE	8/14/01
		COST OF WORK TO BE DONE	\$ 2,000.00		

**DESCRIPTION OF WORK**

Add : 5 =sprinkler heads  
Remove : 1 sprinkler  
Install/Replace : sprinkler plates /turning & raising 2 sprinklers

SPRINKLER MFG.	MODEL	TYPE	TEMPERATURE	ORIFICE SIZE
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**EFFECT ON SYSTEM**

Minimum effect on system. Modifications are at a distance from each other. There are no major changes within a 1,500 SF area of other modifications.

**SPRINKLER SYSTEM CONTRACTOR / ENGINEER / DESIGNER (not the POR)**

NAME	Contractor	EMPLOYEE STATE LICENSE NO.	
FIRM NAME	Gulf Wide Safety Sys.	FIRM MAILING ADDRESS	
CONTACT NAME	Geary Senterfitt	PO BOX 61886	Lafayette, LA. 70596
FIRM LICENSE NUMBER	D 438	PHONE NO	(337) 267-7611
		FAX NO	(337) 267-7211
		EMAIL ADDRESS	gws@gulfwidesafety.com

<b>RECEIVED</b>	FOR FIRE MARSHAL USE ONLY	DATE RECEIVED	8-16	PROJECT NUMBER	227648	REVIEW ARCHITECT	
	<input checked="" type="checkbox"/> Accepted <input type="checkbox"/> Denied	Comments	APPEARS TO COMPLY. FLOYD CARWILE 08/20/01				

4033

- Reaching File
- High Rise File
- SFM Health Care
- Fire Prevention Bureau
- SFM District
- Sprinkler Contractor
- Applicant

4811051501 - 5/25/2000

# Automatic Sprinkler System Modifications REQUEST FOR EXEMPTION

PLEASE PRINT CLEARLY OR TYPE INFORMATION

DATE OF APPLICATION	8/17/01
STATE FIRE MARSHAL ARCHITECTURAL REVIEW NUMBER	<b>PO 220102</b>

LOUISIANA DEPARTMENT OF PUBLIC SAFETY AND CORRECTIONS  
OFFICE OF STATE FIRE MARSHAL

5150 FLORIDA BOULEVARD  
BATON ROUGE, LOUISIANA 70806

PHONE (225) 925-4920 FAX (225) 925-4414  
WEB SITE: www.dps.state.la.us/sfm



PROJECT TITLE (Name of Business)		OFFICE ADDITION MIKE HOOKS, INC.	PROJECT FLOOR	1
NAME OF BUILDING/SHOPPING CENTER			TOTAL NO FLOORS IN BUILDING	2
PHYSICAL LOCATION OF PROJECT	ADDRESS (Street/Suite)	EXEMPTION RESUBMITTAL?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	
Inside City Limits <input checked="" type="checkbox"/>	409 MIKE HOOKS RD.	PREVIOUS REVIEW NUMBER:		
Outside City Limits <input type="checkbox"/>	CITY (In or Near)	ZIP CODE	PARISH	
	WESTLAKE	70669	CALCASIEU	

### PROFESSIONAL OF RECORD (P.O.R.) (If none, then MUST be Owner)

NAME	PHONE	
MAILING ADDRESS (Street/P.O. Box)	FAX	
CITY	STATE	ZIP CODE
P.O.R. LICENSE NO	EMAIL ADDRESS	

### SPRINKLER SYSTEM INFORMATION

OCCUPANCY CLASS (NFPA 101 Chapter)	BUSINESS INDUSTRIAL	HAZARD CLASS (PER NFPA 13)	ORDINARY GR I	PUMP INFORMATION	PLACARD INFORMATION
SYSTEM TYPE	<input checked="" type="checkbox"/> WET <input type="checkbox"/> DRY	DESIGN TYPE	<input checked="" type="checkbox"/> HYDRAULIC <input type="checkbox"/> PIPE SCHEDULE	PRESSURE (psi) 50	0.15 GPM/SF OVER
WATER SOURCE	<input type="checkbox"/> MUNICIPAL <input checked="" type="checkbox"/> PRIVATE	MAIN REDUC. VLV. SET	N/A psi	FLOW (gpm) 60	192 SF. WITH DEMAND OF
TOTAL NUMBER OF EXEMPTION SPRINKLER	4	PRESS REDUC VLV. SET	N/A psi	TEST DATE	20.39 PSI AT
AREA COVERED BY THIS EXEMPTION (sq)	192 (2)	STATIC (psi) 50	RESIDUAL (psi) 35	FLOW (gpm) 50	10.95 GPM AT:
DESCRIPTION OF WORK	AREA COVERED BY THIS EXEMPTION (sq)		COST OF WORK TO BE DONE	\$2000.00	N/A

ADD 2 HEADS IN EACH OF 2 STORAGE ROOMS OFF OF 1" DOMESTIC LINE.

SPRINKLER MFG	MODEL	TYPE	TEMPERATURE	ORIFICE SIZE
VICTAULIC	V27	UPRIGHT	200°	1/2"

EFFECT ON SYSTEM  
SEE HYDRAULIC CALCULATIONS ATTACHED.

### SPRINKLER SYSTEM CONTRACTOR/ENGINEER/DESIGNER (not the POR)

NAME	RON L FOREMAN	EMPLOYEE STATE LICENSE NO.	E000134
FIRM NAME	BAYOU FIRE PROTECTION	FIRM MAILING ADDRESS	2728 W. PRIEN LAKE RD. - P.O. BOX 5394 LAKE CHARLES LA 70606-5394
CONTACT NAME	RON L FOREMAN	FIRM LICENSE NUMBER	S000134
PHONE NO	337-478-3217	FAX NO	337-474-5269
EMAIL ADDRESS	ronforeman@bayoufire.net		

<b>RECEIVED</b>	FOR FIRE MARSHAL USE ONLY	DATE RECEIVED	8/17	PROJECT NUMBER	227659	REVIEW ARCHITECT
	<input checked="" type="checkbox"/> ACCEPTED <input type="checkbox"/> DENIED	Comments	Appears to Comply. Frap Carriers 4634 08/20/01			

Resulting File

High Rise File

SFM Health Care

Fire Prevention Bureau

SFM District

SFM District

SFM District

Sprinkler Contractor

Applicant

## SECTION 211 EMERGENCY OPERATION AND SIGNALING DEVICES

### Rule 211.1 Car Emergency Signaling Devices

Elevators shall be provided with the following signaling devices.

(a) In all buildings, the elevator shall be provided with the following:

[86d] (1) an audible signaling device, operable from the emergency stop switch, where required by Rule 210.2(e), and from a switch marked "ALARM" which is located in or adjacent to each car operating panel. The signaling device shall be located inside the building and audible inside the car and outside the hoistway. One signaling device may be used for a group of elevators.

[85b] (2) means of two-way conversation between the car and a readily accessible point outside the hoistway which is available to emergency personnel (telephone, intercom, etc.). The means to activate the two-way conversation system does not have to be provided in the car.

(3) If the audible signaling device, or the means of two-way conversation, or both, are normally connected to the building power supply, they shall automatically transfer to a source of standby (emergency) power within 10 sec after the normal power supply fails. The power source shall be capable of providing for the operation of the audible signaling device for at least 1 hr, and the means of two-way conversation for at least 4 hr.

[86d] (b) In buildings in which a building attendant (building employee, watchman, etc.) is not continuously available to take action when the required emergency signal is operated, the elevators shall be provided with a means within the car for communicating with or signaling to a service which is capable of taking appropriate action when a building attendant is not available.

A standby (emergency) power system shall be provided conforming to the requirements of Rule 211.1(a)(3).

### [ED] Rule 211.2 Standby (Emergency) Power

An elevator may be powered by a standby (emergency) power system provided that, when operating on such standby power, there is conformance with the requirements of Rules 207.8 and 210.10.

Where the standby power system is designed to operate only one elevator at a time, the energy absorption means, if required, may be located on the power side of the elevator power disconnecting means, provided all other requirements of Rule

210.10 are conformed to when operating any of the elevators the system might serve.

Other building loads such as power and light that may be supplied by the standby power system shall not be considered as a means of absorbing the regenerated energy for the purpose of conforming to Rule 210.10 unless such loads are using their normal power from the standby power system when it is activated.

### Rule 211.3 Firefighters' Service — Automatic Elevators

All automatic (non-designated attendant) operation elevators having a travel of 25 ft (7.62 m) or more above or below the designated level shall conform to the requirements of this Rule.

**211.3a Phase I Emergency Recall Operation.** A three-position ("on," "off," and "by pass") key-operated switch shall be provided only at the designated level for each single elevator or for each group of elevators. The key shall be removable only in the "on" and "off" positions.

When the switch is in the "off" position, normal elevator service shall be provided and the smoke detectors required by Rule 211.3b shall be functional.

When the switch is in the "by pass" position, normal elevator service shall be restored independent of the smoke detector required by Rule 211.3b.

When the switch is in the "on" position:

(1) All cars controlled by this switch which are on automatic service shall return nonstop to the designated level and power-operated doors shall open and remain open.

(2) A car traveling away from the designated level shall reverse at or before the next available floor without opening its doors.

(3) A car stopped at a landing shall have the in-car emergency stop switch, where required by Rule 210.2(e), rendered inoperative as soon as the door is closed, and the car starts toward the designated level. A moving car, traveling to or away from the designated level, shall have the in-car emergency stop switch rendered inoperative immediately. Once the in-car emergency stop switch, where required by Rule 210.2(e), has been rendered inoperative, it shall remain inoperative while the car is on Phase I emergency recall operation. All other emergency stop switches shall remain operative.

(4) A car standing at a floor other than the designated level, with the doors open and the in-car emergency stop switch, where required by Rule 210.2(e), in the run position, shall conform to the following.

(a) Elevators having automatic power-operated



horizontally sliding doors shall close the doors without delay and proceed to the designated level.

(b) Elevators having power-operated vertically sliding doors provided with automatic or momentary pressure closing operation per Rule 112.3d shall have the closing sequence initiated without delay in accordance with Rule 112.3d(1), (2), (3), and (5), and the car shall proceed to the designated level.

(c) Elevators having power-operated doors provided with continuous pressure closing operation per Rule 112.3b or elevators having manual doors shall, when the doors are closed, conform to the requirements of Rule 211.3a. Sequence operation, if provided, shall remain effective.

[85a] (5) Door reopening devices for power-operated doors which are sensitive to smoke or flame shall be rendered inoperative. Mechanically actuated door reopening devices not sensitive to smoke or flame shall remain operative. Door closing for power-operated doors shall conform to the requirements of Rule 112.5.

(6) All car and corridor call buttons and all corridor door opening buttons shall be rendered inoperative. All call registered lights and directional lanterns shall be extinguished and remain inoperative. Position indicators, where provided, shall remain in service.

(7) All cars shall be provided with a visual and audible signal system which shall be activated to alert the passengers that the car is returning nonstop to the designated level. The signal shall remain activated until the car has returned to the designated level.

[85a] (8) A car stopped at a landing shall have the door open button rendered inoperative as soon as the door is closed and the car starts toward the designated level. A moving car traveling to or away from the designated level shall have the door open button rendered inoperative immediately. Once the door open button has been rendered inoperative, it shall remain inoperative until the car has returned to the designated or alternate level.

[ED] **211.3b Smoke Detectors.** Smoke detectors shall be installed in each elevator lobby at each floor and associated machine room in accordance with NFPA No. 72E, Chapter 4. Smoke detectors are not required in elevator lobbies at unenclosed landings. The activation of a smoke detector in any elevator lobby or associated elevator machine room, other than at the designated level, shall cause all cars in all groups that serve that lobby to return nonstop to the designated level. The operation shall conform to the requirements of Rule 211.3a.

No device, other than the Phase I switch (Rule 211.3a) or the detectors in the elevator lobby or associated machine room, shall initiate Phase I operation.

If the smoke detector at the designated level is activated, the cars shall return to an alternate level

approved by the enforcing authority, unless the Phase I switch (Rule 211.3a) is in the "on" position.

Smoke detector activation shall only be reset manually.

**211.3c Phase II Emergency In-Car Operation.** A three-position ("off," "hold," and "on," in that order) key-operated switch shall be provided in or adjacent to an operating panel in each car. It shall become effective only when the designated level Phase I switch (Rule 211.3a) is in the "on" position or a smoke detector (Rule 211.3b) has been activated, and the car has returned to the designated or alternate level by Phase I operation.

The key shall be removable in each position. The "off," "hold," and "on" positions shall not change the operation until the car is at a floor with the doors fully opened.

(1) When in the "on" position, it shall place the elevator on Phase II emergency in-car operation, for use by trained emergency service personnel only, and the elevator shall operate as follows.

(a) The elevator shall be operable only by a person in the car.

(b) All corridor call buttons and directional lanterns shall remain inoperative.

(c) The opening of power-operated doors shall be controlled only by continuous pressure door open buttons. If the button is released prior to the doors reaching the fully open position, the doors shall automatically reclose.

(d) Open power-operated doors shall be closed by continuous pressure on a door close button.

(e) Door reopening devices rendered inoperative per Rule 211.3a(5) shall remain inoperative. Corridor door closing buttons, if provided, shall remain operative.

(f) Every car shall be provided with a call cancel button, which shall be effective during Phase II emergency in-car operation. When activated, all registered calls shall be cancelled and traveling car shall stop at or before the next available floor. [85a]

(g) Floor selection buttons shall be provided in the car to permit travel to all floors served by the car. Means which prevent the operation of these buttons shall be rendered inoperative.

(2) When the switch is in the "hold" position, the car shall remain at the floor with its doors open, and door close buttons shall be inoperative.

(3) When the switch is in the "off" position, the elevator is not at the designated or alternate level, and Phase I operation is in effect:

(a) The car shall operate in accordance with Rule 211.3a(4) and (5).

(b) The car shall return nonstop to the designated or alternate level and power-operated doors shall open.

(4) Elevators shall be removed from Phase II operation only by moving the emergency key-operated

# ELEVATORS & SPRINKLERS

2/24/05

- WATER: POSSIBILITY OF HAZARDS:
  - WATER ON ELECTRICAL
  - SHORTING OF SAFETY CIRCUITS
  - MOTOR, GENERATOR TRANSFORMER
- ASME A17 COMMITTEE WOULD NOT PROHIBIT SPR.

HALON: AIR MOVEMENT BECAUSE OF STACK EFFECT

02.26(A) DISCONNECTION OF THE MAIN LINE POWER TO THE ELEVATOR BEFORE SPRINKLER ACTIVATION.

SCENARIO: FIRE IN MACHINE ROOM OR HOIST

1. - ACTIVATE THE S.D. REQ'D BY 211.36
  - RESULTING ELEVATOR
2. - INTENSITY OF FIRE BUILDS - SPRINKLER ACTIVATION POWER TO ELEVATOR DRIVING MACHINE INTERRUPTED
  - ELEV. CONTROL EQUIP. WILL NOT OPERATE AT 100°F

## 3 AVAILABLE APPROACHES

1) RATE-OF-RISE FIXED TEMP HEAT DET. IN MACHINE RM. & HOISTWAY - ARRANGED TO AUTOMATICALLY DISCONNECT THE MAIN POWER SUPPLY:

- PLACED NEAR EACH SPRINKLER - SPR RATING WOULD EXCEED THE HEAT DETECT RATING
- DETECTORS WOULD BE INDEPENDENT OF THE SPRINKLER SYSTEM

N.B. FIRE, THE HEAT DETECTOR WOULD ACTIVATE & CAUSE A SHUNT TRIP CIRCUIT BREAKER TO DISCONNECT THE MAIN LINE POWER TO THE AFFECTED ELEVATORS, BEFORE ACTIVATION OF SPR.

2) SPR. SYSTEM IN MACHINE RM & HOISTWAY WOULD BE A FIRE ACTION SYSTEM.

- ACTIVATION OF HEAT DET. WOULD OPEN A VALVE PERMITTING WATER TO FLOW INTO THE PIPING.
- HEAT DETECTOR OR WATER FLOW VALVE IN SPR. PIPE WOULD CAUSE A SHUNT TRIP CIRCUIT BREAKER TO DISCONNECT MAIN LINE POWER TO AFFECTED ELEVATORS. AT THE TIME THE VALVE OPENS TO ALLOW WATER FLOW INTO SPR. PIPING.
- THIS SHOULD NOT BE ACTIVATED BY A S.D.
- PHASE I RECALL WOULD NOT WORK

3) RE-ACTION SYSTEM: FLOW SWITCH INSTALLED IN THE PIPE WHERE IT ENTERS MACHINE RM OR HOISTWAY WOULD CONTAIN AIR UNDER PRESSURE FROM THE SPR. HEAD TO FLOW SWITCH. FLOW VALVE WOULD TRIP & CAUSE A SHUNT TRIP CIRCUIT BREAKER TO DISCONNECT MAIN LINE POWER

4/8/07

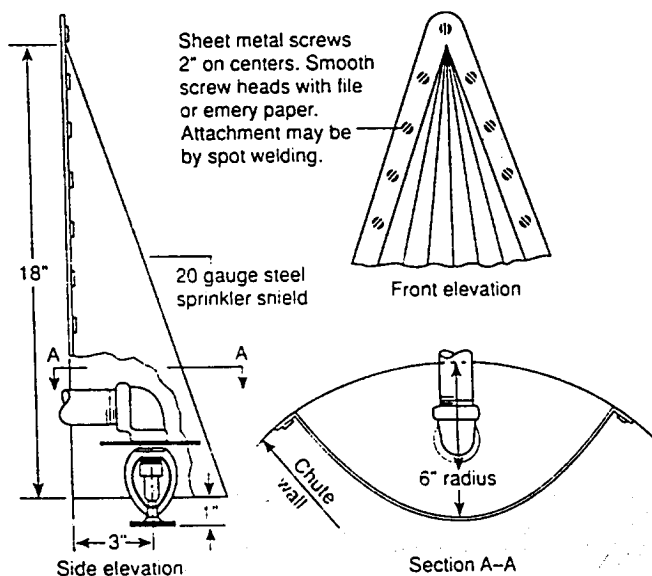


Figure A-4-5.4 Canopy for protecting sprinklers in building service chutes.

onto elevator control elements. Since this symposium, representatives from the building code organizations and ASME have worked to resolve the problem of providing proper fire protection without sacrificing any of the inherent safety features of the sprinkler system or elevator and its associated equipment.

**4-5.5.1\*** Sidewall spray sprinklers shall be installed at the bottom of each elevator hoistway, not more than 2 ft (0.61 m) above the floor of the pit.

Refuse and residual hydraulic fluids have a tendency to collect at the bottom of shafts. A properly located sprinkler will control a fire in such material. Conventional rules for placement of the deflector and clear space below the sprinkler cannot always be adhered to in this area. These issues are not critical, however, because the sprinkler would be physically close to any point where a fire might originate, thus still allowing the sprinkler to control the fire.

*Exception: For enclosed, noncombustible elevator shafts that do not contain combustible hydraulic fluids, the sprinklers at the bottom of the shaft are not required.*

**4-5.5.1** The sprinklers in the pit are intended to protect against fires caused by debris, which can accumulate over time. Ideally, the sprinklers should be located near the side of the pit below the elevator doors, where most debris accumulates. However, care should be taken that the sprinkler location does not interfere with the elevator toe guard, which extends below the face of the door opening.

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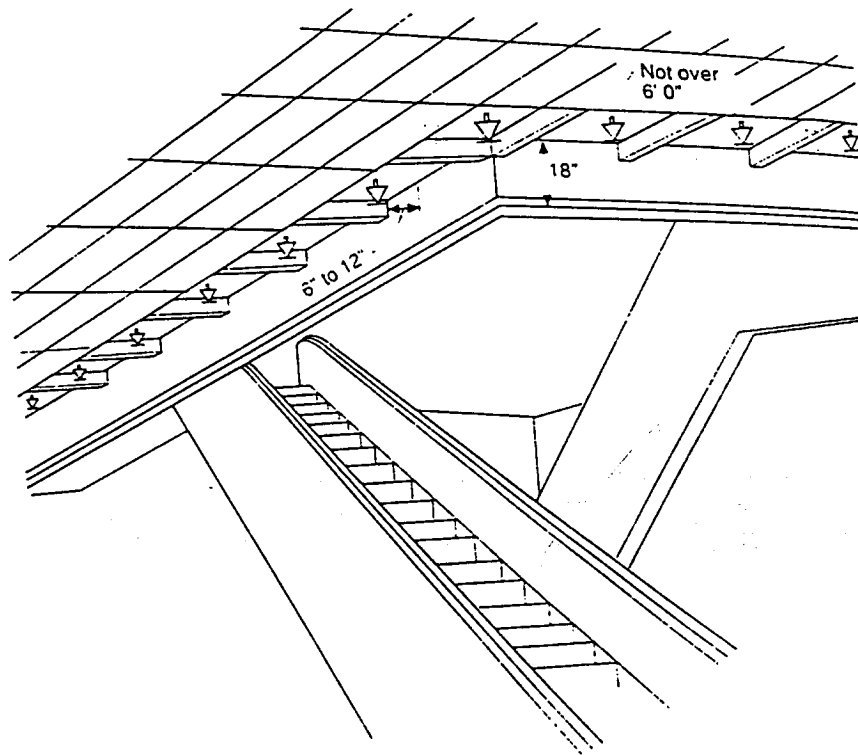


Figure A-4-5.3.4 Sprinklers around escalators.

obstruction within the chute. This can usually be accomplished by recessing the sprinkler in the wall of the chute or by providing a protective deflector canopy over the sprinkler. Sprinklers should be placed so that there will be minimum interference of the discharge therefrom. Sprinklers with special directional discharge characteristics may be advantageous. (See Figure A-4-5.4.)

#### 4-5.5 Elevator Hoistways and Machine Rooms.

Codes that cover elevator design do not permit water discharge in elevator shafts until electrical power to the elevator cab has been shut down. This necessitates some special arrangement, such as a preaction system, to protect such shafts. The additional costs associated with this type of installation and the benefits returned for the protection must be weighed against the small number of fires that involve the elevator shaft.

Several papers on this timely topic were presented at a symposium in February 1991 in Baltimore, MD.<sup>1</sup> The subjects ranged from elevator safety in general to the potential problems associated with premature discharge of water

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**4-5.5.2\*** Automatic sprinklers in elevator machine rooms or at the tops of hoistways shall be of ordinary or intermediate temperature rating.

**A-4-5.5.2** The ASME A17.1 code requires the shutdown of power to the elevator upon or prior to the application of water in elevator machine rooms or hoistways. This may be accomplished by a detection system with sufficient sensitivity to operate prior to the activation of the sprinklers (*see also NFPA 72*). As an alternative, the system may be arranged using devices or sprinklers capable of effecting power shutdown immediately upon sprinkler activation, such as a waterflow switch without a time delay. This is intended to interrupt power before significant sprinkler discharge.

**4-5.5.3\*** Upright or pendent spray sprinklers shall be installed at the top of elevator hoistways.

*Exception: Sprinklers are not required at the tops of noncombustible hoistways of passenger elevators whose car enclosure materials meet the requirements of ASME A17.1, Safety Code for Elevators and Escalators.*

**A-4-5.5.3** Passenger elevator cars that have been constructed in accordance with A17.1 Rule 204.2a (under A17.1a-1985 and later editions of the Code) have limited combustibility. Materials exposed to the interior of the car and the hoistway, in their end-use composition, are limited to a flame spread rating of 0 to 75, and a smoke development rating of 0 to 450.

**4-5.6** Spaces under Ground Floors, Exterior Docks, and Platforms. Sprinklers shall be installed in spaces under all combustible ground floors, exterior docks, and platforms.

*Exception: Sprinklers shall be permitted to be omitted where all of the following conditions prevail:*

- (a) The space is not accessible for storage purposes and is protected against accumulation of wind-borne debris;
- (b) The space contains no equipment such as conveyors or fuel-fired heating units;
- (c) The floor over the space is of tight construction;
- (d) No combustible or flammable liquids or materials that under fire conditions would convert into combustible or flammable liquids are processed, handled, or stored on the floor above the space.

This is another exception to the general rule that all combustible spaces must be sprinklered, and it recognizes that there can be maintenance problems, such as lack of access and danger of freezing, with piping under a floor. The conditions indicated are intended to eliminate sources of ignition from the concealed space and prevent combustibles from being stored or trash from accumulating, thereby limiting combustibles to the floor materials only.